[0037] What is claimed and desired to be secured by United States Letters Patent is:

1. A micro-electro-mechanical generator, comprising:

a housing having a heat source and a heat sink opposite to the heat source in the housing;

an upper diaphragm and a lower diaphragm separated from the upper diaphragm by a constant distance, the upper diaphragm and the lower diaphragm deformable between a first position where the lower diaphragm is thermally connected to the heat source while the upper diaphragm being thermally shut off from the heat sink, and a second position where the upper diaphragm is thermally connected to the heat sink while the lower diaphragm being thermally shut off from the heat source, the upper diaphragm and the lower diaphragm adapted to generate electric energy whenever being deformed; and

a fluid chamber charged with working fluid, the fluid chamber having an upper end defined by the upper diaphragm, a lower end defined by the lower diaphragm and a lateral wall formed between the upper end and the lower end and having a configuration causing that a volume of the fluid chamber in the second position is larger than that of the fluid chamber in the first position.

2. The micro-electro-mechanical generator of Claim 1, wherein at least one of said diaphragms is made of a piezoelectric material.

3. The micro-electro-mechanical generator of Claim 2, wherein the diaphragm has at its center a heat transfer member made of copper.

4. The micro-electro-mechanical generator of Claim 1, wherein said thermal

connection between the upper diaphragm and the heat sink is achieved by conduction.

5. The micro-electro-mechanical generator of Claim 1, wherein said fluid is liquid.

6. The micro-electro-mechanical generator of Claim 1, wherein said heat source is body heat.

7. The micro-electro-mechanical generator of Claim 1, wherein said lateral wall is so inclined that the lateral wall is in a position more retreated from a center of the housing along a direction from the lower diaphragm to the upper diaphragm.

8. The micro-electro-mechanical generator of Claim 1, wherein either of said diaphragms conducts a bi-stable snapping behavior in which it stably stays in only two positions of the first position and the second position.